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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,894	05/01/2006	Sjoerd Stallinga	FR030135	6009

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EXAMINER

NGUYEN, LINH THI

ART UNIT	PAPER NUMBER
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2627

MAIL DATE	DELIVERY MODE
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07/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/577,894	Applicant(s) STALLINGA ET AL.	
	Examiner LINH T. NGUYEN	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Tokiwa et al (US Patent Number 5963524).

In regards to claims 1, 10, 11 and 12, Tokiwa et al discloses an apparatus for measuring the depth of a data record layer in an information record medium having one or more data record layers, the apparatus comprising optical element means for focusing a beam of electromagnetic radiation on a data record layer (Fig. 1, element 1, PU), an actuator for moving said optical element means relative to said information record medium in response to a control current supplied thereto (Fig. 1, element 23 is control by the current feed by the driver 22), focus error signal generation means for generating a focus error control signal for controlling said actuator so as to maintain said electromagnetic radiation beam focused on said data record layer (Fig. 1, element 13 feeds to the controller to output a current to the driver 22 to the actuator to control the focus on the recording surface), and means for determining a control current supplied to said actuator at one or more zero-crossings of said focus error signal (Fig. 1, element 11 and Fig. 2, current i_1 and i_2) and determining therefrom the depth of

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said data record layer in said information record medium (Column 6, lines 10-24).

In regards to claim 2, Tokiwa et al discloses an apparatus according to claim 1, wherein the optical element comprises an objective lens (Fig. 6, element 78).

In regards to claim 3, Tokiwa et al discloses an apparatus according to claim 1, further including means for calculating a proportionality constant between actuator current and depth (Fig. 2, current ($i_2 - i_1$) compare that with the preset to find the depth of a disc).

In regards to claim 4, Tokiwa et al discloses an apparatus according to claim 3, wherein the focus error signal comprises a substantially sinusoidal wave (Fig. 2), and the proportionality constant is proportional to a distance between two predetermined points on said wave (Fig. 2, FE signal points are constant).

In regards to claim 5, Tokiwa et al discloses an apparatus according to claim 4, wherein said two predetermined points comprise respective positive and negative peaks (Fig. 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokiwa et al in view of Hayashi (US Publication Number 20060066714).

In regards to claim 6, Tokiwa et al discloses everything claimed in claim 1 above. However, Tokiwa et al does not disclose wherein the information record medium is rotating, and the apparatus further comprises means arranged and configured to compensate for the resultant oscillation of the information record medium.

In the same field of endeavor, Hayashi discloses wherein the information record medium is rotating, and the apparatus further comprises means arranged and configured to compensate for the resultant oscillation of the information record medium (Paragraph [0017]). At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the apparatus of Tokiwa et al to configure to compensate for the oscillation of recording medium as suggested by Hayashi. The motivation for doing so would have been to control the power of the optical beam to form a recording spot on the target layer (Paragraph [0012]).

In regards to claim 7, Tokiwa et al does not but Hayashi discloses an apparatus, wherein said compensating means comprises means for causing the actuator to substantially follow oscillation of the information record medium

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(Paragraph [0016]). The motivation is the same as claim 6 above.

In regards to claim 8, Tokiwa et al does not but Hayashi discloses an apparatus, comprising means for supplying the actuator with an oscillating current (Paragraph [0017]). The motivation is the same as claim 6 above.

In regards to claim 9, Tokiwa et al does not but Hayashi discloses an apparatus, wherein said compensating means is arranged to cause the actuator to substantially follow any height variation of the information record medium due to rotation thereof (Paragraph 0017]). The motivation is the same as claim 6 above.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokiwa et al in view of Kuwahara et al (US Publication Number 20030058770).

In regards to claims 13 and 14, Tokiwa et al discloses everything claimed in claim 1. However does not disclose a spherical aberration compensating apparatus.

In the same field of endeavor, Kuwahara et al discloses a spherical aberration compensating apparatus (Fig. 5, element 251 and Paragraph [0079]). At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the apparatus of Tokiwa et al to have an aberration compensating apparatus as suggested by Kuwahara et al. The motivation for

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doing so would have been to control the light emitted from the objective lens, therefore, ensure a stable recording/reproducing.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINH T. NGUYEN whose telephone number is (571)272-5513. The examiner can normally be reached on 10:00am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LN

July 16, 2008

/Wayne Young/

Supervisory Patent Examiner, Art Unit 2627